ISSUED

WP 05-WH1604

Revision 2

CH U/G Transporter 52-H-008D and 52-H-008E

Technical Procedure

EFFECTIVE DATE: 08/15/19

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APPROVED FOR USE

THIS DOCUMENT IMPLEMENTS REQUIREMENTS FOR THE HWFP.

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CHANGE HISTORY SUMMARY

REVISION NUMBER	DATE ISSUED	DESCRIPTION OF CHANGES
0	12/14/17	• New Procedure
1	07/31/18	DSA Rev. 6A: • Removed requirement Fire Watch for use beyond 200 ft of CH Waste Face if FSS is inoperable. • Added SAC 5.5.1, 5.5.8, LCO 3.1.2, and 3.3.8 to Precautions and Limitations. • Added SAC 5.5.1 to Attachment 1 title. • Removed SAC 5.5.1 from individual steps.
2	08/15/19	• Corrected Precautions to match JHA. DSA Rev 6a Page Change 002a: • Removed reference to SAC 5.5.8.

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this procedure is to provide instructions for performing preoperational inspections of Underground (U/G) Transporters 52-H-008D and 52-H-008E at WIPP.

Performance of this procedure, or selected sections of the procedure, implement Hazardous Waste Facility Permit (HWFP) inspection requirements.

1.2 SCOPE

This procedure applies to Waste Handling personnel performing preoperational inspections on U/G Transporters at WIPP.

This procedure meets Surveillance Requirements (SR) 4.1.2.1 of Limiting Conditions of Operation (LCO) 3.1.2 and Specific Administrative Control (SAC) 5.5.1.

1.3 RECORDS

Performance of this procedure generates the following records. Records generated are handled in accordance with departmental Records Inventory and Disposition Schedules (RIDS).

- Equipment Logbook
- EA04AD3001-SR10, LCO Surveillance Data Sheet

2.0 REFERENCES

DOCUMENT NUMBER AND TITLE	BASELINE DOCUMENT	REFERENCED DOCUMENT	KEY STEP
30 CFR 56, Safety and Health Standards – Surface Metal and Nonmetal Mines	✓		
30 CFR 57, Safety and Health Standards – Underground Metal and Nonmetal Mines	✓		
31 CFR 58, Health Standards for Metal and Nonmetal Mines	✓		
40 CFR §264.15, General Inspection Requirements	✓		
DOE/WIPP-07-3372, Waste Isolation Pilot Plant Documented Safety Analysis	✓		
DOE/WIPP-07-3373, Waste Isolation Pilot Plant Technical Safety Requirements	✓		**($)**

DOCUMENT NUMBER AND TITLE	BASELINE DOCUMENT	REFERENCED DOCUMENT	KEY STEP
Hazardous Waste Facility Permit, EPA Identification No. NM4890139088-TSDF	✓		**($)**
WP 04-AD3001, Facility Mode Compliance		✓	
WP 04-AD3016, Equipment Out of Service Process		✓	
WP 05-WH1810, Underground Transuranic Mixed Waste Disposal Area Inspection		✓	
WP 12-HP1100, Radiological Surveys	✓		
WP 12-HP1500, Radiological Posting and Access Control	✓		
WP 13-1, Nuclear Waste Partnership LLC Quality Assurance Program Description	✓		
WP 15-GM1002, Issue Management Processing of WIPP Forms		✓	
EA04AD3001-SR10, LCO Surveillance Data Sheet		✓	
STDJHA-1112, Preoperational Checks of Transporter 52-H-008D and 52-H-008E	✓		

3.0 PRECAUTIONS AND LIMITATIONS

3.1 PRECAUTIONS

- Eye, foot, head, and hand hazards exist during equipment operations. Personnel will wear proper personal protective equipment (PPE) including safety shoes, leather (mechanics) gloves, hard hat, and safety glasses with side shields as required.
- Ground control hazards exist during equipment operations. Personnel will bar-down scale.
- Noise hazards exist during equipment operations. Personnel will wear ear plugs as required.
- Pinch point hazards exist during equipment operations. Personnel will wear leather (mechanics) gloves and maintain situational awareness.
- Poor illumination hazards exist during general operations. Personnel will use temporary lighting and cap lamps in dimly lit areas.
- Radiological hazards exist during general operations. Personnel will operate within Radiological Work Permit controls and obey all postings.
- Rotating/moving equipment hazards exist during general operations. Personnel will maintain situational awareness.

- Slips/trips hazards exist during general operations. Personnel will practice good housekeeping, utilize a spotter, and maintain situational awareness.
- Vehicle traffic, heavy equipment hazards exist during general operations. Personnel will utilize a designated spotter with a high visibility vest. Personnel will travel surfaces suitable for the transporter.
- Ventilation hazards exist. Personnel will ensure minimum ventilation requirements for equipment use underground (U/G).

3.2 LIMITATIONS

3.2.1 Prior to use, Vehicles/Equipment to be operated within 25 feet of a CH WASTE FACE, in the TRANSPORT PATH when CH WASTE is present in the TRANSPORT PATH, or in the WASTE SHAFT STATION when CH WASTE is present in the WASTE SHAFT STATION, shall be inspected for the following attributes: **[SAC 5.5.1]**

- Brake operation, as applicable.
- Steering, as applicable.
- No excessive leaks.
- Operating lights and horn, as applicable.
- Fluid levels are within operating range, as applicable.
- Cleanliness.

3.2.2 The Fire Suppression System on underground vehicles/equipment selected for use shall be operable when the vehicle is in the WASTE SHAFT STATION and CH WASTE is present; when the vehicle is in the TRANSPORT PATH and CH WASTE is present; and when the vehicle is less than or equal to the minimum standoff distance as specified in Table 3.1.2-1, Standoff Distances from WASTE FACE for Vehicles /Equipment Containing Liquid Combustibles. An operable fire suppression system consists of: **[LCO 3.1.2]**

- Control Panel with functional status indicating light(s).
- Temperature detection elements.
- Adequately charged suppressant system.
- Distribution system to disperse the suppressant.
- Automatic engine cutoff capability.

3.2.3 Vehicles/equipment shall be controlled as follows: **[LCO 3.3.8]**

- Liquid-fueled vehicles/equipment:
  - Attended in the WASTE SHAFT STATION when CH WASTE is present in the WASTE SHAFT STATION
  - Attended in the TRANSPORT PATH when CH WASTE is present in the TRANSPORT PATH
  - Attended when within 25 feet from a CH WASTE FACE.
  - Limited to no more than two liquid-fueled vehicles/equipment within 25 feet of a CH WASTE FACE

3.2.4 Underground Ventilation Filtration System (UVFS)/Interim Ventilation System (IVS) shall be operable. **[LCO 3.2.3]**

4.0 PREREQUISITE ACTIONS

4.1 **REVIEW** Equipment Logbook for outstanding deficiencies and Action Requests (ARs).

4.2 **CONTACT** Underground Services, and **VERIFY** U/G ventilation is aligned to allow Transporter operation.

5.0 PERFORMANCE

5.1 PREOPERATIONAL CHECKS

5.1.1 **IF** a required inspection becomes delinquent, or has failed, **THEN:**

[A] Immediately **NOTIFY** on-call Site Environmental Compliance (SEC) Representative and Central Monitoring Room Operator (CMRO) of delinquent or failed inspection.

[B] **SCHEDULE** and **COMPLETE** required inspection.

[C] **DOCUMENT** the following and **SUBMIT** to SEC manager within five working days:

- Schedule for inspection.
- Reasons why inspection was not performed.
- Compensatory measures taken to offset negative impacts resulting from not performing inspection.
- Actions to prevent further delinquencies.

[D] Waste Handling Engineer (WHE), **GO TO** WP 15-GM1002, Issues Management Processing of WIPP Forms, and **ENSURE** a WIPP form is generated, **THEN RETURN** to Step 5.1.2.

HWFP

5.1.2 **($) COMPLETE** Attachment 1, CH Underground Transporter 52-H-008D and 52-H-008E Preoperational Checks. **[HWFP Table E-1] [SAC 5.5.1] [LCO 3.1.2] [SR 4.1.2.1]**

5.2 LEAK CATEGORIZATION

5.2.1 **USE** Attachment 2, Leak Categorization, to evaluate and categorize leaks identified in Step 5.1.2.

HWFP 5.3 **($)** DOCUMENTATION OF CHECKS **[HWFP Table E-1]**

5.3.1 **RECORD** in Equipment Logbook:

- Deficiencies found.
- Procedure number.
- Equipment number.
- Hour meter reading.
- Check SAT or Problems Noted.
- Addition of any fluids.
- Corrective actions taken (e.g., outstanding/newly generated Action Requests [AR]).
- Enter date, time and signature to document performance of preoperational inspection.

5.3.2 **NOTIFY** WHE by phone or in-person communication of deficiencies discovered during Preoperational Checks that CANNOT be corrected by Operator.

TSR 5.3.3 **($) WHEN** preparing for Waste Handling Mode, **COMPLETE** EA04AD3001-SR10, LCO Surveillance Data Sheet. **[LCO 3.1.2] [SR 4.1.2.1]**

5.3.4 **FORWARD** completed EA04AD3001-SR10 to FSM for review and approval.

5.4 TRANSPORTER SHUTDOWN

5.4.1 **PARK** Transporter away from traffic.

5.4.2 **APPLY** parking brake and **PLACE** transmission in neutral (N).

5.4.3 **TURN** lights OFF.

5.4.4 **TURN** Start Switch OFF.

5.4.5 **CHOCK** Transporter wheels.

5.4.6 **TURN** battery disconnect switch to OFF.

HWFP ($) Attachment 1 – CH Underground Transporter 52-H-008D and 52-H-008E Preoperational Checks [HWFP Table E-1] [SAC 5.5.1]

NOTE

1. Deficiencies that are corrected when discovered may be considered a satisfactory check. Deficiencies that cannot be corrected require permission from Waste Handling engineer prior to operating Transporter.
2. Inspection may be performed in any order.

Inspect for mechanical operability, deterioration, leaks/spills, and required equipment:

- Deterioration includes: obvious visible cracks, leaks, salt build-up, damage, corrosion, loose or missing parts, malfunctions, and structural deterioration.
- Mechanical Operability means that the equipment has been checked and is operating in accordance with site safety requirements (e.g. proper fluid levels and tire pressure; functioning lights, alarms, sirens, and power/battery units; and belts, cables, nuts/bolts, and gears in good condition).

	INSPECTION	CRITERIA	SAT	UNSAT
1	Checks before Startup	Check area around vehicle for obstacles that might be damaged by, or cause damage		
		Check engine oil level		
		Check air cleaner sight gauge is in yellow zone		
		Check hydraulic oil reservoir level with engine off. Oil level should not be above the top sight gauge or below the lower sight gauge		
		Check Fire Extinguisher is charged and Inspection up to date		
		Ensure frame joint safety bar is NOT connected.		
		Check seat belt to make certain fastener works and belt is not worn or cut		
		Adjust operator's seat to a comfortable operating position		
		Transmission has fluid within normal range on dipstick		
		Minimal accumulation of oil/grease		
		Tires NOT excessively worn or cracked		
		Wheel lugs are tight and torque indicators applied		
		Sufficient fuel for operations		
		Verify no excessive leaks (i.e., battery compartment, hydraulic lines, fuel lines, couplings, fittings) as indicated by visible flow of fluid under pressure, puddles beneath equipment, or abnormal loss of hydraulic fluid. If leak is identified, refer to Attachment 2		
		Pallet Handler – no obvious cracks, breaks, wear, or slack in chain		
		Engine coolant level is in proper range in reservoir		
		Battery compartment is free of acid spills or leaks		
		No loose or missing caps or cables in battery compartment		

	INSPECTION	CRITERIA	SAT	UNSAT
2	Start Engine	Turn battery disconnect to ON position		
		Check lights and horn to ensure operational		
		Adjust and fasten seat belt		
		Transmission must be in neutral and park brake must be applied to start engine		
		Turn Start Switch ON		
		Fault/Warning lights are OFF		
		Immediately investigate any unusual noises		
		Wait for Powerview Warning Lights to go out – approximately 3-5 seconds		
		Turn Start Switch to start position to engage starter motor and hold until engine starts–Do **NOT** hold for periods longer than 15 seconds		
		Allow starter to cool before cranking again		
3	After Engine Starts	Check Engine Oil Pressure Electronic Engine Display – Oil pressure should read 25-50 PSI at idle and a full engine load pressure should read between 45-60 PSI		
		Voltmeter should read between 24-30 volts		
		Test pallet mover and hook actuator operation		
		Transmission Temperature Gauge is in green zone		
		Transmission Pressure Gauge should read approximately 250 PSI		
		Brake Pressure Gauges – normal operating pressure is between 1500-2200 PSI		
		Transmission oil pressure should read between 180-220 PSI		
4	Park Brake Test	Set Park Brake		
		Place shifter in 2nd Gear – forward		
		Depress throttle – Vehicle does not move		
		Brake pedal has 2 to3 inches of free play – readily felt by hand		
		Brake pedal is NOT springy or spongy and does NOT stick or bind when pressed		
		Brake lights illuminate when pedal is pushed		
		Parking brake pedal releases		
		Transporter steering operates smoothly		
		Brakes are in good condition		
		Backup alarm is operational while moving in reverse		
		Transporter stops when service brake is applied		
		Parking brake sets		

NOTE

Failure of Fire Suppression System (FSS) in the following step does not require entry into LCO 3.1.2. However, Transporter cannot be used for Waste Handling on EA04AD3001-SR10, *LCO Surveillance Data Sheet*.

TSR	5	FSS	**($)** FSS electronic display panel green status LED is illuminated on display screen **[LCO 3.1.2] [SR 4.1.2.1]**		

Attachment 2 – Leak Categorization

	TYPE 0	TYPE 1	TYPE 2	TYPE 3	TYPE 4
Indications	No indications of moisture - dry	Dampness around hoses or engine compartments including oil sheen	Dripping from a hose	Spraying from a hose or oil running down firewall, etc.	Ruptured hose (e.g., oil line, fuel line)
STATUS	**OPERATIONAL**		**DO NOT OPERATE**		
Required Actions	None	Record leak Type 1 and source of leak in Equipment Logbook	**[A] TAG** equipment Out Of Service (OOS) with an OOS Tag in accordance with WP 04-AD3016, Equipment Out of Service Process. **[B] SUBMIT** Action Request (AR) for repairs. **[C] RECORD** leak type and AR number in Equipment Logbook. **[D] WHEN** repairs and cleanup are completed, equipment can be put back into service.		